

Title (en)
VIRTUAL AND AUGMENTED REALITY SYSTEMS AND METHODS

Title (de)
SYSTEME UND VERFAHREN FÜR VIRTUELLE UND ERWEITERTE REALITÄTEN

Title (fr)
SYSTÈMES ET PROCÉDÉS DE RÉALITÉ VIRTUELLE ET AUGMENTÉE

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Abstract (en)
[origin: US2017276948A1] Methods and systems are disclosed for presenting virtual objects on a limited number of depth planes using, e.g., an augmented reality display system. A farthest one of the depth planes is within a mismatch tolerance of optical infinity. The display system may switch the depth plane on which content is actively displayed, so that the content is displayed on the depth plane on which a user is fixating. The impact of errors in fixation tracking is addressed using partially overlapping depth planes. A fixation depth at which a user is fixating is determined and the display system determines whether to adjust selection of a selected depth plane at which a virtual object is presented. The determination may be based on whether the fixation depth falls within a depth overlap region of adjacent depth planes. The display system may switch the active depth plane depending upon whether the fixation depth falls outside the overlap region.

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IL 261769 B1 20240401; IL 261769 B2 20240801; IL 311155 A 20240401; JP 2019512741 A 20190516; JP 2022097588 A 20220630;
JP 2023129621 A 20230914; JP 7152312 B2 20221012; JP 7398507 B2 20231214; KR 102550587 B1 20230630; KR 102667713 B1 20240520;
KR 20180122726 A 20181113; KR 20220115816 A 20220818; KR 20230098725 A 20230704; NZ 746514 A 20200327;
US 11467408 B2 20221011; US 11966059 B2 20240423; US 2020319466 A1 20201008; US 2023032100 A1 20230202;
US 2024264446 A1 20240808; WO 2017165848 A1 20170928; WO 2017165848 A8 20181004

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US 201715469369 A 20170324; AU 2017238847 A 20170324; AU 2021273574 A 20211124; AU 2024203082 A 20240509;
CA 3017930 A 20170324; CN 201780032331 A 20170324; CN 202110864567 A 20170324; EP 17771290 A 20170324;
IL 26176918 A 20180913; IL 31115524 A 20240228; JP 2018549246 A 20170324; JP 2022074389 A 20220428; JP 2023121586 A 20230726;
KR 20187030833 A 20170324; KR 20227027052 A 20170324; KR 20237021717 A 20170324; NZ 74651417 A 20170324;
US 2017024145 W 20170324; US 202016904423 A 20200617; US 202217962355 A 20221007; US 202418611050 A 20240320